



IDAHO DEPARTMENT OF
HEALTH & WELFARE

Bureau of Community and Environmental Health

**Summary of ATSDR's Health Consultation for the Eastern Michaud Flats
(EMF) Contamination Site (Pocatello, Idaho):
"Radiological Contamination in Air"**

What is ATSDR?

The Agency for Toxic Substances and Disease Registry (ATSDR) is a federal public health agency. The Agency's mission is to prevent harm to human health from contact with dangerous substances released from Superfund sites. A Superfund site is a serious, uncontrolled or abandoned hazardous waste site.

What is the EMF site?

EMF is a Superfund site covering 2,530 acres on the Fort Hall Indian Reservation and near Pocatello, Idaho. Two phosphate processing plants, FMC Corp. and J.R. Simplot Co. operate on the eastern part of the site. FMC operates almost entirely within the Reservation. The J.R. Simplot Company is located directly east of FMC but does not operate on the reservation. The area within a 1-mile radius of the FMC and Simplot plants is mostly agricultural or industrial land with few residences. The area within a 5-mile radius of the plants is much more populated and includes much of the cities of Chubbuck, Pocatello, and a large portion of the Fort Hall Indian Reservation.

What is a health consultation?

An ATSDR health consultation gives information about potential health risks caused by a specific site, a chemical release, or hazardous material. Health consultations may lead to further actions that will help reduce potential health risks to the community. In this case, the community around the EMF site includes members of the Shoshone-Bannock Tribes and residents of Chubbuck and Pocatello. The specific public health concern at EMF involves the emissions of two phosphate processing plants. These emissions contribute to potentially unhealthy levels of air pollution in Chubbuck and Pocatello and on the reservation. Citizens raised concerns about the numbers of cases of asthma and upper respiratory infections in their communities.

ATSDR, in a previous health consultation, found that poor air quality in these areas was related to the two phosphate processing plants on the EMF site. The chemicals they released, and continue to release, contribute to air pollution. The tribal members and nearby residents also raised concerns about the potential health effects of radioactive materials released from the plants. This fact sheet summarizes the ATSDR health consultation that addressed the radiological contaminants released from the plants' operations.

What radioactive materials do the phosphate plants release to the air?

Both plants release radioactive materials to the environment. These contaminants include: thorium-232, radium-226, uranium isotopes-238, -235, -234, polonium -210, lead -210, and radon-222.

What are the potential health effects of these radioactive materials?

The radioactive materials released from the EMF site emit radiation. When present in quantities over the federal limit, the radiation from these materials may damage the lungs, bone marrow, the surface of bones, and may cause leukemia.

What were the results of ATSDR's review?

The Radiological Contamination in Air Associated with EMF Contamination report reviews and discusses the radiological impact of air releases from the FMC and Simplot operations. The sampling period was from October-December 1993 and ATSDR bases this health consultation only on that time period. After reviewing radiological air data collected in and around the EMF area, ATSDR does not consider the radiological emissions in the air during that specific time period to be a public health concern. ATSDR found that although radioactive material was being released to the air from both plants, the amounts released did not exceed any federal standards during the sampling period. Because they did not have data for other periods of time, ATSDR is uncertain about exposures that could have resulted previously. Air emissions could have been different then.

Is air quality around EMF a possible public health hazard?

Levels of air pollution throughout Chubbuck and Pocatello have been and continue to be a public health hazard as a result of emissions from FMC, Simplot, and other sources. Although there is no evidence of radionuclides being an imminent threat at this time, other air emissions such as particulate matter and sulfur dioxide are still at levels that pose public health hazards. Exposure to these is linked to an increased risk of upper respiratory illness and asthma. The most sensitive population, which includes children, people with asthma, lung disease, heart disease, the elderly, and smokers are most at risk for adverse health effects from air pollution. Inversions, periods of calm air with freezing temperatures and at least 70% humidity, can cause episodes of poor air quality and trap harmful chemicals close to the ground.

How can I protect myself?

During inversions and periods of poor air quality, call the Idaho Department of Environmental Quality's air quality hotline at (208) 236-6173 or log on to the web site at <http://www.deq.state.id.us> and check the air quality index. People living in the EMF area, especially sensitive people should take special precautions during periods of poor air quality. These precautions include staying indoors and avoiding air pollution and moderate exercise. Exercise that keeps your heart rate between 55-75% of your maximum heart rate is considered moderate. To calculate the heart rate you need to stay below to avoid moderate exercise, subtract your age from 220 and multiply by 0.55 ($[220 - \text{age}] \times 0.55$).

For more information:

The Bureau of Community and Environmental Health, Idaho Division of Health, works with ATSDR to protect human health from dangerous substances in the environment. The Bureau has a Project to inform and educate the citizens of Idaho about these substances at Superfund sites and the activities being conducted at these sites. This fact sheet has been created to assist you in understanding what ATSDR did relating to the EMF site.

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